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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/699,915

11/03/2003

Joachim Worm

MTL-004

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29626

7590

03/15/2005

THE H.T. THAN LAW GROUP
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EXAMINER

BAREFORD, KATHERINE A

ART UNIT

PAPER NUMBER

1762

DATE MAILED: 03/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/699,915

Applicant(s)

WORM, JOACHIM

Examiner

Katherine A. Bareford

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 18 and 19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-17, in the reply filed on February 3, 2005 is acknowledged. The traversal is on the ground(s) that Group II, claims 18-19, drawn to product claims should be examined because the ^{re} is no serious burden on the part of the Examiner to include Group II. This is not found persuasive because the product claims of Group II can be made by a different process than that claimed by Group I, as discussed in the Election requirement of January 19, 2005. As a result, when examining the case, the Examiner would have to consider each piece of prior art examined under two different standards of patentability. This would create a serious burden on the Examiner.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 18-19 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on February 3, 2005.

Drawings

3. Figures 1a, 1b and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the

Art Unit: 1762

application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action.

The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities: at page 6, line 11, "Fig. 1" should be "Fig. 1a and Fig. 1b" to provide reference to both drawings.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-2, 5-11, and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 496 545 A2 (hereinafter '545).

'545 teaches a method of continuous production of a glass fiber reinforced resin plate.

Figures 5 and 7 and column 1, lines 5-10 and column 2, lines 20-45. The formed plate can be

Art Unit: 1762

coated with resin materials and filler. Column 2, lines 54-60 and column 6, lines 5-25. The method includes bonding of resin and glass fibers by heating to form a plate like base material. Column 4, lines 20-55. The base material is cooled after initial heating, forming a partially cured (or gelatinized) base material. Figures 5 and 7 and column 4, line 45 through column 5, line 20 (the heated material is removed from the first oven to a spot where the coating occurs, thus cooling will occur as the material passes through the unheated zone). The surface of the base material which is to be coated is not yet completely hardened. Column 6, lines 10-20. Then a mixture of resin material and filler can be applied to the not yet hardened surface. Column 2, lines 54-60 and column 6, lines 15-25. The coated base material is then heated in an oven to fully cure the material. Column 6, lines 20-40. '545 teaches that well known filler particles can be silica, feldspar or glass bubbles. Column 6, lines 55-60.

Claims 6, 15: cooling fluid would be provided in the form of room temperature air. Figures 5 and 7 and column 4, line 45 through column 5, line 20 (the heated material is removed from the first oven to a spot where the coating occurs, thus cooling will occur as the material passes through the unheated zone of room temperature air).

Claims 7, 16: the heating at step (d) can be to 240 to 300 degrees F, or 115 to 148 degrees C. Column 5, lines 35-50.

Claims 8, 17: The ^{base material}~~film~~ can be initially covered by a film on the surface that is to be coated, and that film can be pulled off from the base material before the coating steps. Figure 1 and column 5, lines 1-10 and column 6, lines 5-15.

Art Unit: 1762

Claim 9: '545 teaches a method of continuous production of a glass fiber reinforced resin plate. Figures 5 and 7 and column 1, lines 5-10 and column 2, lines 20-45. The plate can be coated with resin materials and filler. Column 2, lines 54-60 and column 3, lines 5-10 and column 7, lines 15-25. The method includes bonding of resin and glass fibers by heating to form a plate like base material. Column 4, lines 20-55. The base material is cooled after initial heating, forming a partially cured (or gelatinized) base material. Figures 5 and 7 and column 4, line 45 through column 5, line 20 (the heated material is removed from the first oven to a spot where the coating occurs, thus cooling will occur as the material passes through the unheated zone). The surface of the base material which is to be coated is not yet completely hardened. vds Column 6, lines 10-20. Then a resin material ~~and~~ can be applied to the not yet hardened surface. Column 2, lines 54-60 and column 6, lines 15-25. Then particles, such as silica, can be applied to the not yet hardened surface. Column 7, lines 15-25 and column 6, lines 40-60. The applied sand can be rolled into the curable layer. Figure 7 and column 6, lines 50-55. The coated base material is then heated in an oven to fully cure the material. Column 7, lines 1-15.

Claim 10: the steps described above can be carried out in that sequence. See column 7, lines 15-25.

'545 teaches all the features of these claims except (1) that the specific filler and particulate materials are sand, (2) that the same type of resin is used in steps (a) and (c) (claims 2, 11), (3) the cool down temperature (claims 5, 14), (4) the precise temperature of the heating step (claims 7, 16).

Art Unit: 1762

W However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify '545 to (1) use sand as the filler or particulate material with an expectation of desirable coating and product results, because '545 teaches using ^{filler}~~filler~~ or particulate material, and that such filler or particulate material can be silica, and it is well known that sand is primarily silica material. (2) It would further have been obvious to modify '545 to use the same type of resin in steps (a) and (c) with an expectation of desirable coating and product results, because '545 teaches that the resin of step (a) can be polyester or other resins (column 4, lines 5-15) and that the resin of step (c) can be selected from a variety of compounds (column 2, lines 55-60 and column 6, lines 15-20), and one of ordinary skill in the art would understand that the resins could be either the same or different based on the product desired given the wide ranges taught. (3) It would further have been obvious to perform routine experimentation to optimize '545 to find the optimum cool down temperature at which the resin/filler coating is applied given the teaching by '545 of using a range of temperatures in the first oven and to control to provide only a partial cure, which would vary based on the resin material used (column 4, lines 30-55). (4) It would further have been obvious to perform routine experimentation to optimize '545 to select the optimum temperature of the curing in the second oven from the range given the teaching by '545.

7. Claims 2 and 12 rejected under 35 U.S.C. 103(a) as being unpatentable over '545 as applied to claims 1-2, 5-11, and 14-17 above, and further in view of Holmes (US 4243719).

'545 teaches all the features of these claims except that the vapors are drawn off.

However, Holmes teaches providing resin/glass laminates. Column 1, lines 1-10. When performing coating with a liquid resin material that is heated and cross linked in an oven to a temperature of 80 to 230 degrees C, Holmes teaches to provide for provision to vent or remove organic vapors thus produced. Column 8, line 25 through column 9, line 25.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify '545 to draw off vapors which emerge during the process as suggested by Holmes to provide for removal of toxic fumes, because '545 teaches a process whereby resins are applied and heated, and Holmes teaches that it is well known to remove organic vapors from heated

VAS ^{resins}
~~reasons~~ in coating processes.
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8. Claims 3 and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over '545 as applied to claims 1-2, 5-11, and 14-17 above, and further in view of Conard (US 3980610).

'545 teaches all the features of these claims except the use of the radical donors.

However, Conard teaches providing polyester resins that can have glass fiber incorporated. Column 1, lines 25-30 and column 2, lines 20-25. Such resins are taught as conventionally being provided with a curing agent such as peroxide that provides radical donors and heated to cure. Column 2, lines 50-68..

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify '545 to use a peroxide curing agent as suggested by Conard so as to provide a desirable curing, because '545 teaches a process whereby resins, such as polyester, are applied and

Art Unit: 1762

heated to cure, and Conard teaches that when curing polyester resins, it is well known to use a peroxide curing agent for improved curing.

9. Benedict et al (US 5681612) also teaches mixtures of resin and glass fibers which are partially cured and then coated with abrasive particles and resin followed by curing. See column 35, lines 1-25, for example.

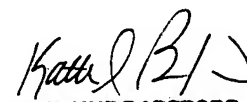
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine A. Bareford whose telephone number is (571) 272-1413. The examiner can normally be reached on M-F(6:00-3:30) with the First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and for After Final communications.

Other inquiries can be directed to the Tech Center 1700 telephone number at (571) 272-1700.

Furthermore, information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


KATHERINE BAREFORD
PRIMARY EXAMINER